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10/773,068	02/04/2004	Steve Elmer	AOL0134	6042
22862 7590 01/11/2008 GLENN PATENT GROUP 3475 EDISON WAY, SUITE L MENLO PARK, CA 94025			EXAMINER ADAMS, CHARLES D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary

Application No.

10/773,068

Applicant(s)

ELMER, STEVE

Examiner

Charles D. Adams

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,7-13,17-23 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,7-13,17-23 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. In response to communications filed on 16 October 2007, claims 1, 3, 7, 11, 13, 17, 21, and 23 are amended and claims 4-6, 14-16, 24-26, and 31-32 are cancelled. Claims 1-3, 7-13, 17-23, and 27-30 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 11-12, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glerum et al. (US Patent 6,652,267) in view of Marullo et al. (US Patent 6,185,701), and further in view of Dutta et al. (US Patent 6,918,066).

As to claim 1, Glerum et al. teaches a method of testing browser software in a computer environment (see Abstract and 1:38-57), the method comprising the steps of:

Glerum et al. does not teach generating a list of URLs (Universal Resource Location) using a web crawler;

Marullo et al. teaches generating a list of URLs (Universal Resource Location) using a web crawler (see 13:62-14:14).

Glerum et al. as modified teaches applying a browser test (see Marullo et al. 8:22-45), wherein said browser test script automatically instructs a first browser program containing said browser software to load and render web pages according to the list of URLs, wherein said browser test script tests said browser software over a plurality of applications at sites contained within the list of URLs (see Marullo et al. 8:22-45);

Detecting one or more errors in rendering of said first browser program using the web pages (see Glerum et al. 1:38-57 and 4:63-5:3)

Glerum et al. as modified does not teach by comparing a representation of rendering results of the first browser program to a representation of rendering results of a second browser program, wherein a representation of rendering results of a browser program comprises an internal representation of a web page as interpreted by the browser program and wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program

Dutta et al. teaches by comparing a representation of rendering results of the first browser program to a representation of rendering results of a second browser program (see 7:23-35 and 7:50-65), wherein a representation of rendering results of a browser program comprises an internal representation of a web page as interpreted by the browser program (see 7:50-65. The scorecard evaluates how well the various browsers displayed a page based on an internal representation of the page, "this scorecard compares the web site as it is displayed on each browser to a standard set of criteria that includes accessibility of the web site, the percentage of the content of the web site

displayed by each browser, the load time of the web site on each browser, and the compatibility of scripts of the web site across different browsers”) and wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program (see 8:9-11, 8:41-55, and 8:65-9:14); and

Glerum et al. as modified teaches:

Automatically storing information about said one or more errors (see Glenrum et al. 4:63-5:3);

Wherein said step of applying a browser test script is performed while said first browser program is under development and prior to distribution (see Glerum et al. 4:63-5:3 and 8:61-9:3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. by the teaching of Marullo et al., since Marullo et al. teaches that “by providing for the aforementioned automated client-based web universal resource (link) extraction tool, such automation avoids the inadequacies associated with user testing and intervention wherein manual users might otherwise be required to request pages, view document source, and document all of the links (assuming they were found without error) associated with the HTML pages. The getlinks subsystem accordingly automatically finds all links on each page, and moreover formats the output data for use by the other test tools” (see 14:32-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Glerum et al. by the teaching of

Dutta et al., since Dutta et al. teaches that “In addition to testing the web site on the various browsers to determine the effectiveness of each browser, it is also desirable to have a technique that can compare each browser’s execution of the web site to a set of criteria established by the web designed” (see 3:15-20).

As to claim 11, Glerum et al. teaches an apparatus of testing browser software in a computer environment (see Abstract and 1:38-57), comprising:

A plurality of software modules (see Abstract and 1:38-57), said plurality of software modules including:

Glerum et al. does not teach a module for generating a list of URLs (Universal Resource Location) using a web crawler;

Marullo et al. teaches a module for generating a list of URLs (Universal Resource Location) using a web crawler (see 13:62-14:14);

Glerum et al. as modified teaches a browser test script module (see Marullo et al. 8:22-45), wherein said browser test script module automatically instructs a first browser program containing said browser software to load and render web pages according to the list of URLs, wherein said browser test script tests said browser software over a plurality of applications at sites contained within the list of URLs (see Marullo et al. 8:22-45);

A module for detecting one or more errors in rendering of said first browser program using the web pages (see Glerum et al. 1:38-57 and 4:63-5:3)

Glerum et al. as modified does not teach by comparing a representation of rendering results of the first browser program to a representation of rendering results of a second browser program, wherein a representation of rendering results of a browser program comprises an internal representation of a web page as interpreted by the browser program and wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program;

Dutta et al. teaches by comparing a representation of rendering results of the first browser program to a representation of rendering results of a second browser program (see 7:23-35 and 7:50-65), wherein a representation of rendering results of a browser program comprises an internal representation of a web page as interpreted by the browser program and wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program see 8:9-11, 8:41-55, and 8:65-9:14); and

Glerum et al. as modified teaches:

A module for automatically storing information about said one or more errors (see Glerum et al. 4:63-5:3);

Said apparatus further comprising at least one computer, wherein said plurality of software modules are executed on said at least one computer (see Glerum et al. Abstract, 1:38-57, and 3:36-58)

Wherein said first browser program is under development prior to distribution of said browser program (see Glerum et al. 4:63-5:3 and 8:61-9:3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. by the teaching of Marullo et al., since Marullo et al. teaches that "by providing for the aforementioned automated client-based web universal resource (link) extraction tool, such automation avoids the inadequacies associated with user testing and intervention wherein manual users might otherwise be required to request pages, view document source, and document all of the links (assuming they were found without error) associated with the HTML pages. The getlinks subsystem accordingly automatically finds all links on each page, and moreover formats the output data for use by the other test tools" (see 14:32-43).

As to claim 21, Glerum et al. teaches a program storage medium readable by a computer, tangibly embodying a program of instructions executable by the computer to perform a method for testing a browser software in a computer environment (see Abstract and 1:38-57), the method comprising the steps of:

Glerum et al. does not teach generating a list of URLs (Universal Resource Location) using a web crawler;

Marullo et al. teaches generating a list of URLs (Universal Resource Location) using a web crawler (see 13:62-14:14);

Glerum et al. as modified teaches applying a browser test script (see Marullo et al. 8:22-45), wherein said browser test script automatically instructs a first browser

program containing said browser software to load and render web pages according to the list of URLs, wherein said browser test script tests said browser software over a plurality of applications at sites contained within the list of URLs (see Marullo et al. 8:22-45);

Detecting one or more errors in rendering of said first browser program using the web pages (see Glerum et al. 1:38-57 and 4:63-5:3)

Glerum et al. as modified does not teach by comparing a representation of rendering results of the first browser program to a representation of rendering results of a second browser program, wherein a representation of rendering results of a browser program comprises an internal representation of a web page as interpreted by the browser program and wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program;

Dutta et al. teaches by comparing a representation of rendering results of the first browser program to a representation of rendering results of a second browser program (see 7:23-35 and 7:50-65), wherein a representation of rendering results of a browser program comprises an internal representation of a web page as interpreted by the browser program and wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program (see 8:9-11, 8:41-55, and 8:65-9:14);

Automatically storing information about said one or more errors (see Glerum et al. 4:63-5:3);

Wherein said step of applying a browser test script is performed while said first browser program is under development and prior to distribution (see Glerum et al. 4:63-5:3 and 8:61-9:3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. by the teaching of Marullo et al., since Marullo et al. teaches that "by providing for the aforementioned automated client-based web universal resource (link) extraction tool, such automation avoids the inadequacies associated with user testing and intervention wherein manual users might otherwise be required to request pages, view document source, and document all of the links (assuming they were found without error) associated with the HTML pages. The getlinks subsystem accordingly automatically finds all links on each page, and moreover formats the output data for use by the other test tools" (see 14:32-43).

As to claims 2, 12, and 22, Glerum et al. as modified teaches wherein the one or more errors include a crash of the first browser program in rendering one of the web pages (see 1:38-57).

As to claims, 3, 13, and 23, Glerum et al. as modified teaches the claim upon which this claim is dependent.

Glerum et al. as modified teaches said browser test script automatically instructs said second browser program load and render the web pages (see Dutta et al. 7:23-35 and Marullo et al. 8:22-45);

4. Claims 7, 17, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glerum et al. (US Patent 6,6529,267) in view of Marullo et al. (US Patent 6,185,701), in view of Dutta et al. (US Patent 6,918,066), and further in view of Castro ("HTML FOR THE WORLD WIDE WEB").

Glerum et al. as modified teaches the claims upon which these claims are dependent.

Glerum et al. does not explicitly teach wherein the internal representation of the web page comprises attributes of the web page, including:

A background color;

A number of columns of a table; and

A number of rows of a table.

Castro teaches wherein the internal representation of the web page comprises attributes of the web page, including:

A background color (see page 228);

A number of columns of a table (see pages 228 and 233. A number of columns are shown in the HTML code); and

A number of rows of a table (see pages 228 and 233. A number of rows are shown in the HTML code).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. to have included the teaching of Castro to interpret common HTML code when rendering the web page,

since interpreting a web page and rendering the web page based on the tags found within it was well known to anyone of ordinary skill in the art at the time the invention was made. It would have been an obvious test as to how well a browser worked by determining whether or not the browser could render 'table' and 'background color' HTML tags.

5. Claims 8, 18, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glerum et al. (US Patent 6,652,267) in view of Marullo et al. (US Patent 6,185,701), in view of Dutta et al. (US Patent 6,918,066), and further in view of Shindo (US Patent 6,865,592).

Glerum et al. as modified teaches the claim upon which these claims depend.

Glerum et al. as modified does not teach automatically restarting the first browser program after a crash of the first browser program in rendering one of the web pages.

Shindo teaches automatically restarting the first browser program after a crash of the first browser program in rendering one of the web pages (see Shindo 11:15-23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. by the teaching of Shindo, since Shindo teaches that "if a failure occurs due to the Web environment on the automatic transaction apparatus side, such as halting of the Web browser, or if a failure occurs due to the Web environment on the Web server side, such as shut-down of the server or congestion on the network, the automatic transaction apparatus cannot

download applications required to operate. Therefore the automatic transaction apparatus halts the process. If the automatic transaction apparatus stops, customers cannot be serviced" (see 1:31-39).

6. Claim 9-10, 19-20, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glerum et al. (US Patent 6,6529,267) in view of Marullo et al. (US Patent 6,185,701), in view of Dutta et al. (US Patent 6,918,066), and further in view of Garcia-Chiesa (US Pre-Grant Publication 2002/0099723).

As to claims 9, 19, and 29, Glerum et al. as modified teaches the claim upon which these claims depend.

Glerum et al. as modified teaches does not teach further comprising the step of avoiding duplicated visits to a same URL.

Garcia-Chiesa teaches further comprising the step of avoiding duplicated visits to a same URL (see Garcia-Chiesa paragraph [0010]. "Further, the methods the present invention generate lists of unique URLs that are marked each of them as static, thus the engines do not need to follow ANY non-static link. Plus, the list that follows is deduplicated, optimized and sanitized").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. by the teaching of Garcia-Chiesa, since Garcia-Chiesa teaches that "Further more the techniques include the elimination of possible crawling loops that due to minor differences in the emitted URLs

format could otherwise be undetected by crawlers not specifically aware of the non-materiality of these subtle syntactic differences" (see paragraph [0043]).

As to claim 10, 20, and 30, Glerum et al. as modified teaches the claims upon which these claims are dependent.

Glerum et al. does not teach wherein a number of URLs are removed from the URLs reported by the web crawler to generate the list of URLs (see Garcia-Chiesa paragraph [0010]. Removing duplicates will remove URLs from the list).

Garcia-Chiesa teaches wherein a number of URLs are removed from the URLs reported by the web crawler to generate the list of URLs (see Garcia-Chiesa paragraph [0010]. Removing duplicates will remove URLs from the list).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Glerum et al. by the teaching of Garcia-Chiesa, since Garcia-Chiesa teaches that "Further more the techniques include the elimination of possible crawling loops that due to minor differences in the emitted URLs format could otherwise be undetected by crawlers not specifically aware of the non-materiality of these subtle syntactic differences" (see paragraph [0043]).

Response to Arguments

7. Applicant's arguments filed 16 October 2007 have been fully considered but they are not persuasive.

In regards to the subject matter previously of claims 3, 13, and 23, Applicant argues that the browser emulations are not browser programs. The Authoritative Dictionary of IEEE Standards Terms, 7th Edition, define a program as “(6) A prepared sequence of instructions to the system to accomplish a defined task”. The Authoritative Dictionary of IEEE Standards Terms, 7th Edition also defines emulation as “(software) a model that accepts the same input and produces the same output as a given system”, and an emulator as “a device, computer program, or system that performs emulation”.

The browser emulators of Dutta et al. are programs, as they are sequences of computer instructions to accomplish a given task. They also emulate browsers, by accepting input and producing output in the same manner of the browser programs that they emulate. Because they are programs, and because they browse and interpret webpages, they are “browser programs”.

Applicant argues that “however, in a test of a browser, the best that the tester could hope for using an emulator to test the browser would be a test of the emulator, rather than the browser”. It is noted that the result of the claim limitation is “comparing a representation of rendering results”, “wherein one or more errors are detecting when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program”. It is noted that these limitations deal with comparing results of browser output, and detecting problems in rendering of webpages. Each of these limitations is accomplished by the emulators of Dutta et al., which, as stated above, are “browser programs”.

While Examiner believes that the emulator programs of Dutta et al. are “browser programs”, as stated above, Examiner cited another passage in Dutta et al. wherein Dutta et al. proposed using “actual browser programs” in place of the emulators. In response to this citation, Applicant argues that Dutta et al. teaches away from using the “actual browser programs”. Dutta et al. states in 8:41-42, and 8:44-47 that “After selecting the browsers, step **64** emulates the web page for the selected browsers” and “One method to run these pages is to use the browser emulator programs **47** illustrated in Figure 4. Another approach would be to have the actual browser programs stored in the server machine”. As Dutta et al. proposes replacing the emulators with the “actual browser programs”, it would have been obvious to one of ordinary skill in the art to use the same method used for emulating pages and automatically load the web pages in each actual browser.

In regards to the subject matter previously of claims 4, 14, and 24, Applicant argues that Applicant still maintains that the cited teachings have nothing to do with errors. In response to this argument, Examiner maintains that misrepresenting tag interpretation, incorrect and incompatible output for scripts, and incorrectly handling user data are all examples of ‘errors’.

Applicant argues that “it is clear that, even if it were correct that the scorecard is a catalog of errors, the errors are due to design deficiencies of the web page and have nothing to do with browser errors or defects”. In response to this argument, Examiner notes that the errors recited in the independent claim also have nothing to with “browser

errors or defects”, but are errors detected in the representation of the webpages in the first and second browser.

In regards to the subject matter previously of claims 6, 16, and 26, Applicant argues that Dutta et al. does not teach “an internal representation of a web page as interpreted by the first browser program”. In response to this argument, the Examiner notes that a scorecard is created that “gives the user a summary of how the web site would be displayed on various browser. This scorecard compares the web site as it is displayed on each browser to a standard set of criteria that includes accessibility of the web site, the percentage of the content of the web site displayed by each browser, and the load time of the web site on each browser and the compatibility of scripts of the web site across different browsers” (see 7:50-57). Thus, there is a representation of each website on each browser that is compared against these measures to provide data for the scorecard. As this representation is internal to the program and can change from browser to browser (indicated by the fact that each browser may have different scores in rendering a web page), it is “an internal representation of a web page as interpreted by the first browser program”.

Applicant argues that “there is no indication, however, that the scorecard is internal to a web browser”. In response to this argument, in the claims there is no allegation that the ‘internal representation’ is internal to the web browser. The claims only go so far as to state that the representation is “internal”.

In regards to claims 7, 17, and 27, Examiner has clarified his rejection of the "internal representation", and notes that the subject matter of claims 7, 17, and 27 is comprised of tags well known to those of ordinary skill in the art of web development, and is taught by Castro et al.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Adams whose telephone number is (571) 272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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